



**MINISTRY OF INFORMATION AND COMMUNICATIONS  
OF THE SOCIALIST REPUBLIC OF VIETNAM**

**AUTHORITY OF RADIO FREQUENCY MANAGEMENT**

# **Spectrum licensing and spectrum auction in case study of Vietnam**

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**Ha Noi, 11/2016**

# Outline

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- 1. Introduction about Vietnam**
- 2. Organization of National Spectrum  
Management structure in Vietnam**
- 3. Summary of ICT market in Vietnam**
- 4. Issues handled - Case study of Vietnam**

# The Socialist Republic of Vietnam

**Territory:** 330,951.1 sq. km

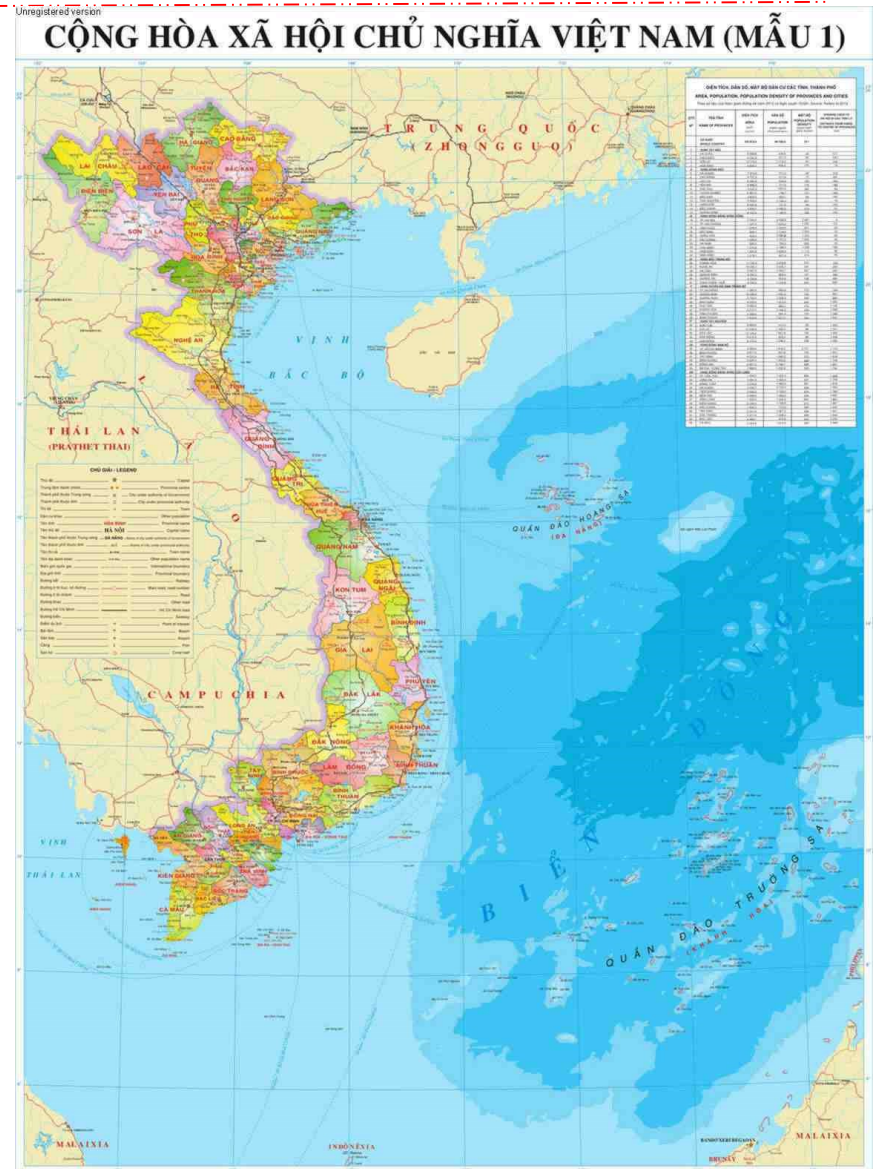
**Population:** ~ 92, mil.

**Capital:** Ha Noi

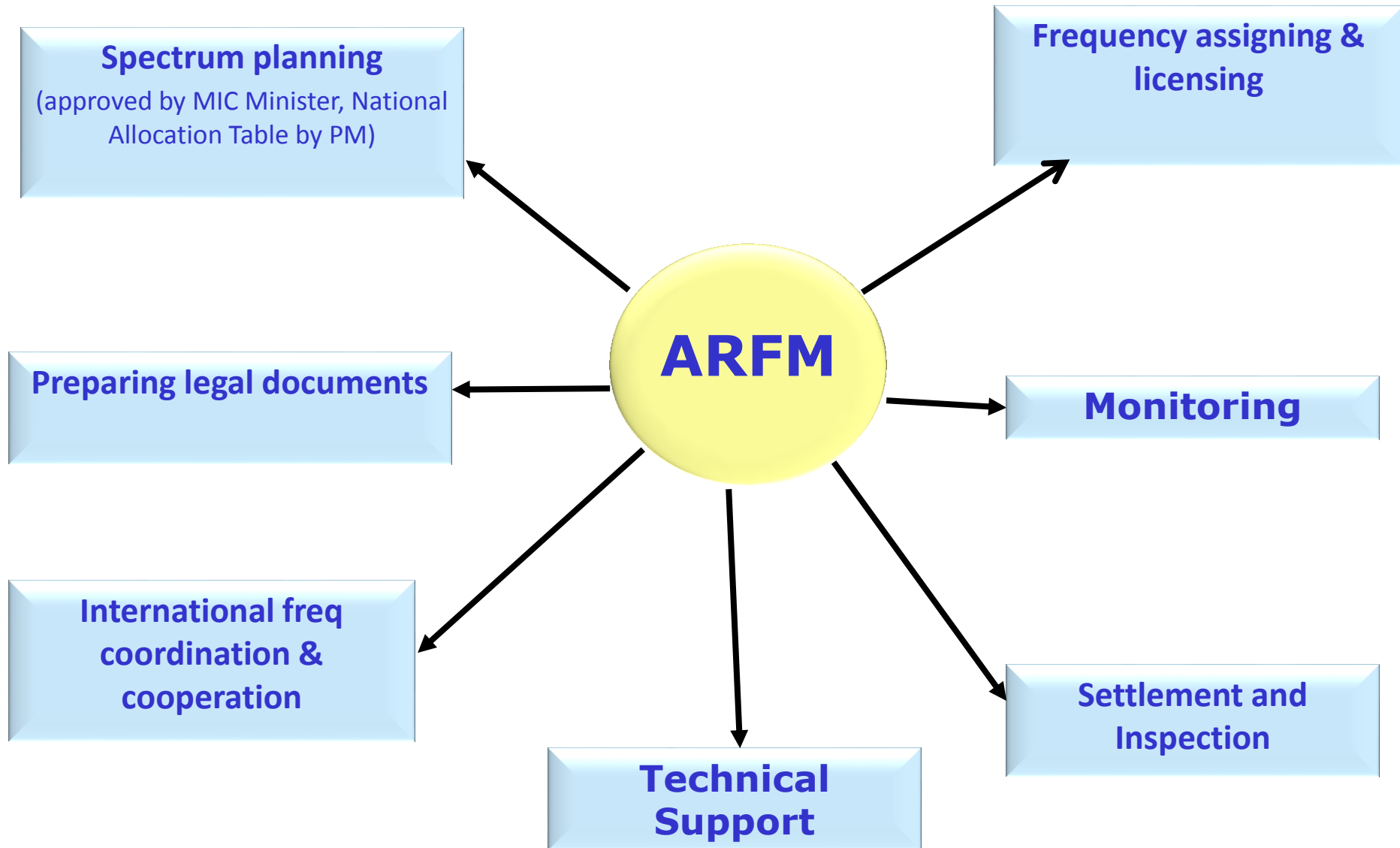
**Climate:** Viet Nam lies in the tropics and monsoon

**Topography:** Three quarters of Viet Nam's territory consist of mountains and hills

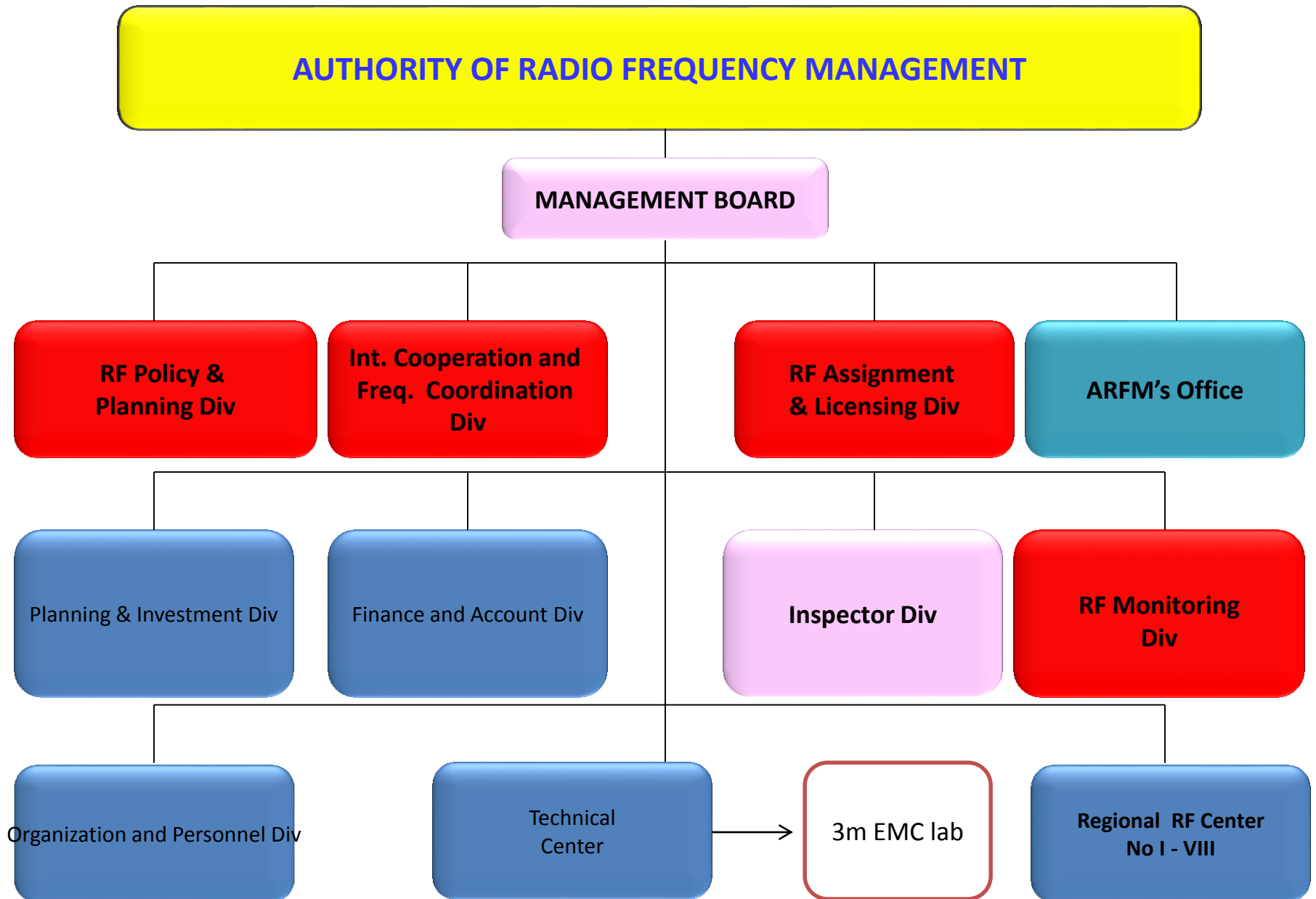
**Administrative Units:** Viet Nam is divided into 63 provinces and cities.



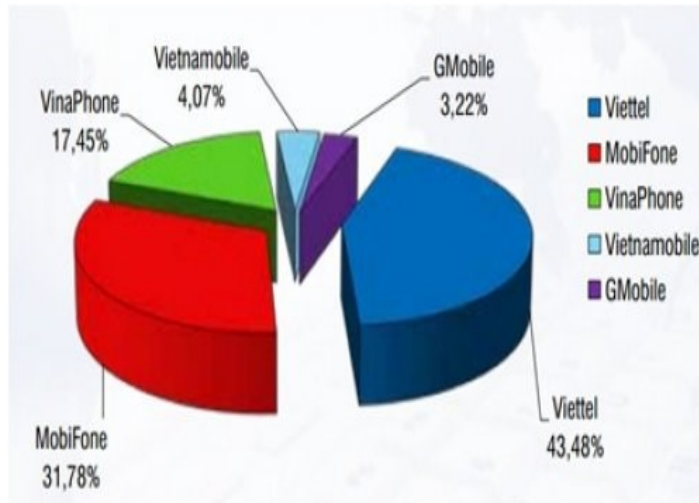
# ARFM's RESPONSIBILITIES



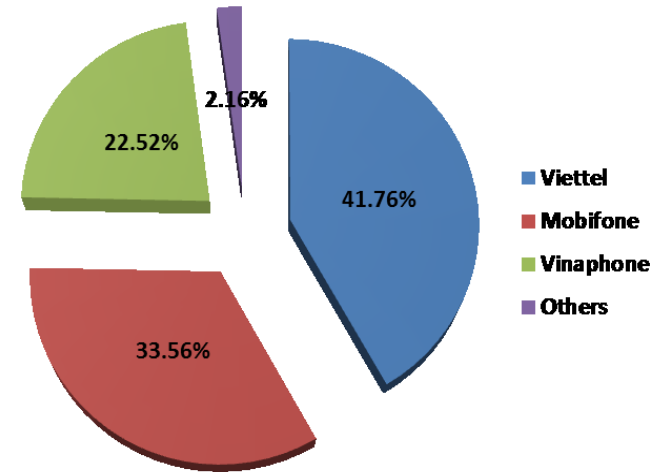
# ARFM structure



# Summary ICT market in Vietnam

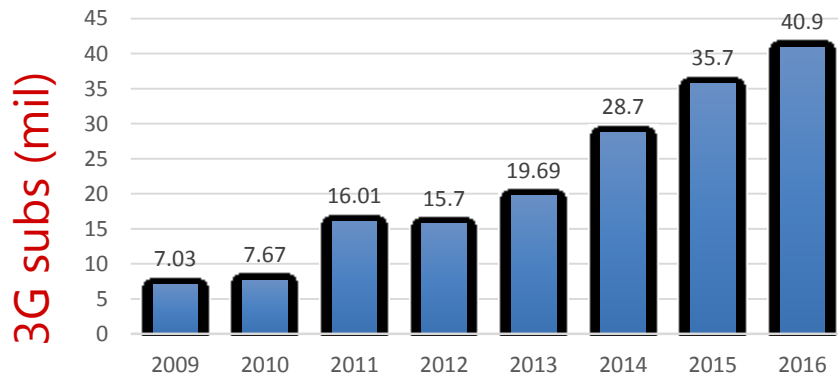


Mobile market share



3G market share

3G subscribers (mil)



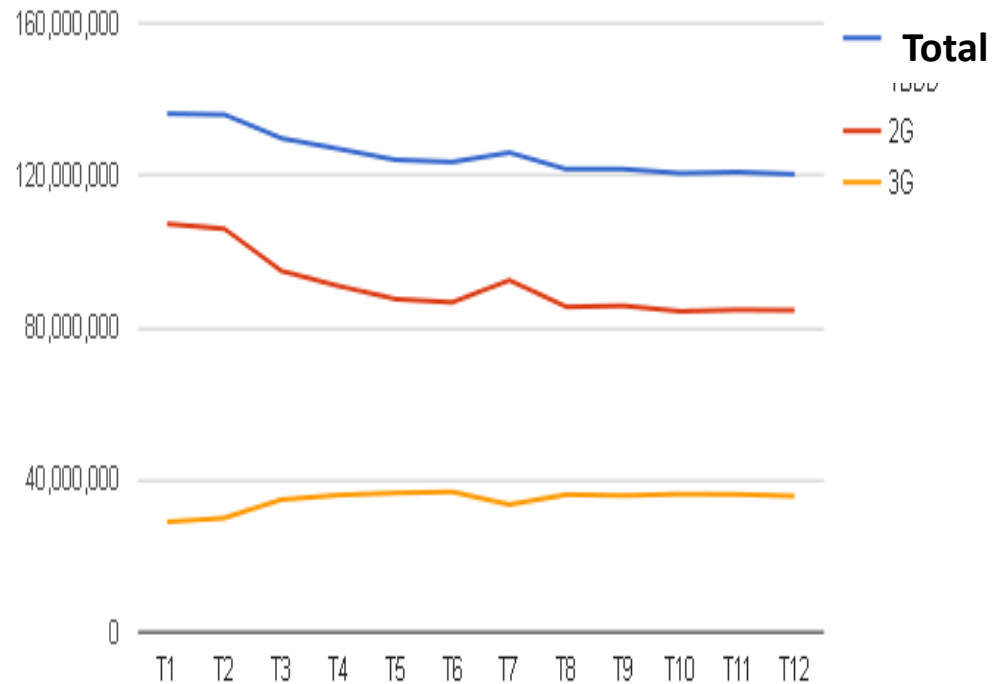
# Number of 2G subs. decreases but still plays a crucial role

126,99 mil mobile subscribers (July 2016)

2G mobile subscribers account for 68%

3G mobile subscribers account for 32 %

2G services will be still launched in paralell with 3G (4G) services



*The number of 2G/3G subscribers  
July 2016*

# Frequency assignment and Licensing

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- **Simplify procedures of licensing and assignments**
- **license transfer for some specific cases;**
- **Online- licensing: microwave, satellite, private networks**
- **Update on licensing exempt regulations**



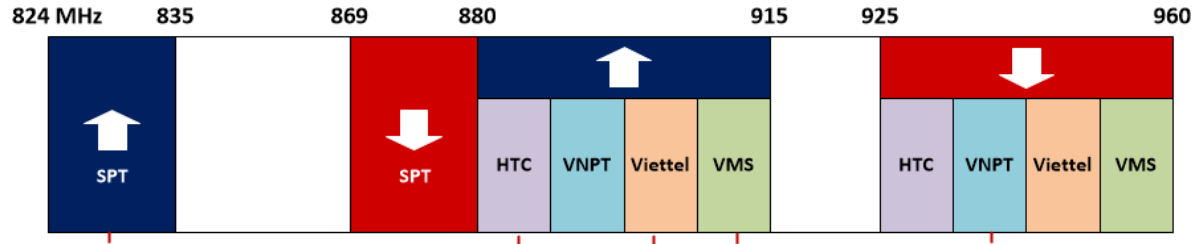
# Frequency assignment and Licensing

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- **Granting and renewing >28.000 licenses in 2015**
- **Radio frequency use licenses for all radiocommunication services e.g telecommunications, broadcasting, aeronautical and maritime services.**
- **Including around 21,280 electronic licenses**

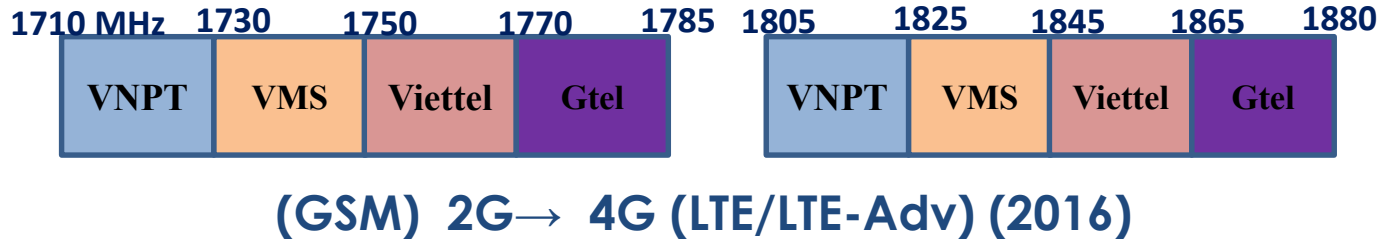
# Licensed Frequency Bands

## 850/900 MHz Band

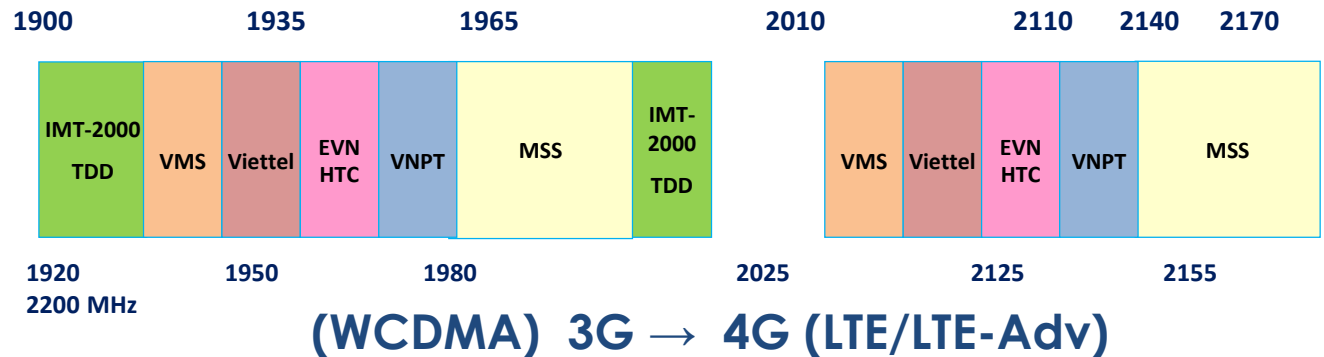


CDMA/ GSM (2G) → 3G/4G (WCDMA, LTE, LTE-Adv)

## 1,800 MHz Band



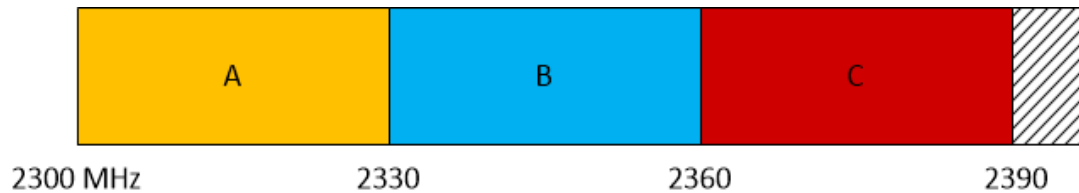
## 2,100 MHz Band



# New spectrum for 4G/5G

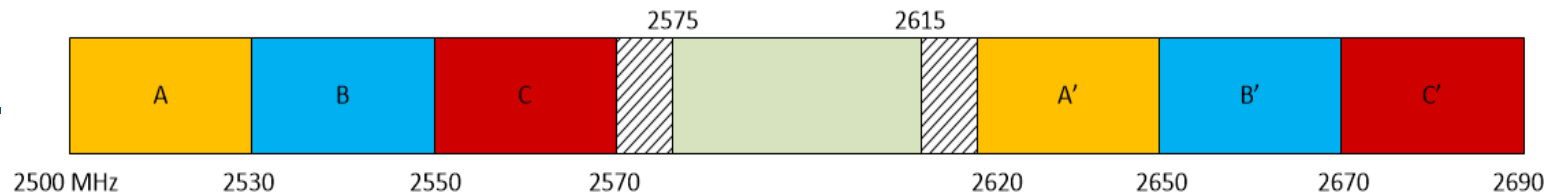
## 2,300 MHz Band

**LTE/LTE-Adv**



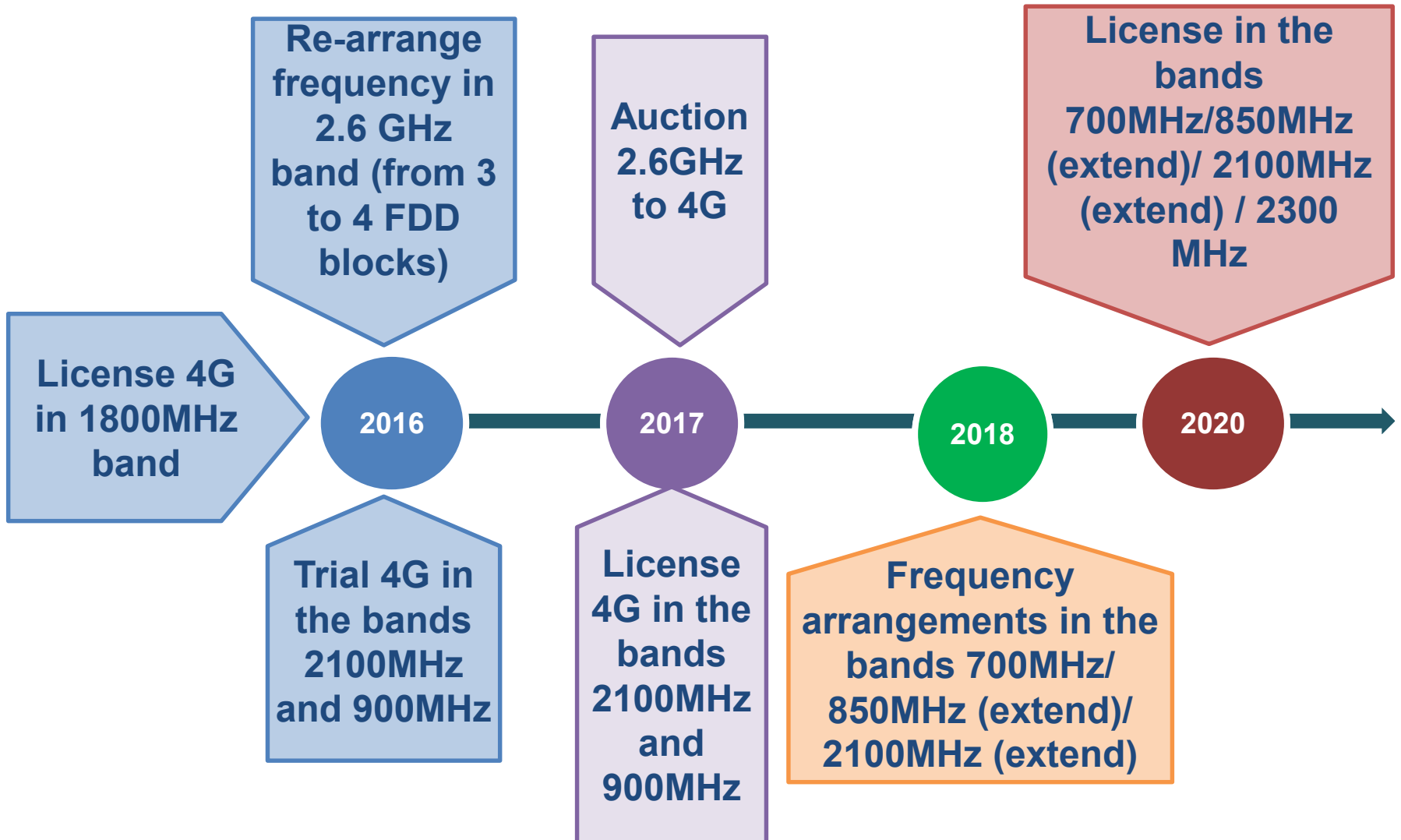
## 2,600 MHz Band

**LTE/LTE-Adv**



**The 2.6 GHz band will be auctioned in 2017**

# 4G Licensing Roadmap



# SPECTRUM AUCTION

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*Decision No. 16/2012/QĐ-TTg of the Prime Minister regulating the spectrum auction and transfer of spectrum usage rights*

1. Initial price of the candidate frequency band(s)
2. Public notification: form, registration, preliminary evaluations
3. Spectrum auction: multi-round, parallel for multi frequency bands
4. Withdrawal , abrogation, final result announcement
5. Re-auction
6. Auction fee, deposit (1~15% of initial price) & final payment
7. Spectrum license, communications license grant / revoke
8. Winners' responsibilities

# SPECTRUM AUCTION

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*Band 2,600 MHz in the year 2017*

02 options for auction:

- Seal-bid auction: operators propose price for each MHz of each band in sealed envelopes
- Simultaneous Multiple Round Auction (SMRA) with Switching: operators can switch and propose price for any band at each round

SRMA with switching is preferred in case of Vietnam with only 4 bands

# TRANSFER OF SPECTRUM USAGE RIGHTS

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- **License from spectrum auction can be transferred (>3 years after the license has been granted)**
- **Procedure for/responsibility of the transferor(s)**
- **Procedure for/responsibility of the receiver(s)**
- **MIC will verify the transaction within 45 days**

# **SPECTRUM AUCTION**

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**Decision No. 835/2014/QD-TTg dated 03 June 2014**

**Frequency bands: 2,300 – 2,400 MHz, 2,500 – 2,570 MHz and 2,620 – 2,690 MHz**



**Auction time: To be decided by MIC based on Plan, Market requirement, Technology, Services**



# Thank you!

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